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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,279	12/14/2000	Seiji Hiroshima	MIT:024	7933

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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,279

Applicant(s)

HIROSHIMA ET AL.

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.84(h)(5) because Figures 1, 1A, and 1B show(s) modified forms of construction in the same view. In figure 1 there is no gap between the left side of bearing 12a and the left most side of element 2a immediately above bearing 12a, however, figure 1A shows a gap. Also, in figure 1 the line associated with element P2 extends tangent to the left side of bearing 86, however, in figure 1B the line associated with element P2 passes through a central portion of bearing 86. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Claim Objections

3. Claims 1-11 are objected to because of the following informalities: the limitation of "the one shaft" first claimed in line 11 of claim 1 should be changed to --the one of the primary shaft and the secondary shaft-- in order to maintain consistent claim terminology. Appropriate correction throughout the claims is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5006092 to Neuman et al. Neuman et al. show in figures 1 and 2 a belt-type continuously variable transmission comprising: a continuously variable transmission mechanism comprising: a primary shaft 20 having a primary pulley 24; a secondary shaft 32 having a secondary pulley 28, and an endless belt 33 wound on the primary pulley and the secondary pulley, a housing (outlined in blue in the attached copy of figure 1) that accommodates the continuously variable transmission mechanism, the housing having an end wall that is formed with a first bearing mounting hole through which one end portion of one 20 of the primary shaft and the secondary shaft penetrates, the end wall having a first outwardly facing side as labeled and a first inwardly facing side as labeled opposite to the first outwardly facing side around the first bearing mounting hole, a first bearing (outlined in yellow in the copy of figure 1) fitted in the first bearing mounting hole and allowing the one shaft 20 to be supported rotatably by the end wall, a flange (indicated by the Examiner in the copy of figure 1) extending radially from the first inwardly facing side toward the first bearing mounting hole, a bearing retainer (outlined in red in the copy of figure 1) provided on the first outwardly

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facing side of the end wall and projecting radially inwardly toward the first bearing mounting hole and engaging the first bearing to pinch the first bearing against the first flange as shown, and a first cover (outlined in yellow in the copy of figure 1) that is connected to the housing (at the bottom of the figure 1) and covers the one end portion of the one shaft and the bearing retainer.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-8, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuman et al. in view of Lamers.

Re: claims 2-6, 8, 10, and 11. Neuman et al. show in figures 1 and 2 the end wall being formed with a second bearing mounting hole shown to the left of element number 31 through which one end portion of the other 32 of the primary shaft and the secondary shaft penetrates, the belt-type continuously variable transmission further comprising: a second bearing (outlined in orange in the copy of figure 1) that is fitted in the second bearing mounting hole and allows the other shaft 32 to be supported rotatably by the end wall, an urging member (outlined in purple in the copy of figure 1) in contact with an inwardly facing side surface of the second bearing, and a second cover (outlined in green in the copy of figure 1) connected to the housing via intervening elements covering the one end portion of the one shaft 32 engaging the bearing on an

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outwardly facing side thereof to pinch the bearing axially inwardly against the urging member.

Lamers teaches in figure 2 and in col. 2 line 55 the use of an urging member 22 being elastically deformable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the urging member of Neuman et al. to have been elastically deformable, as taught by Lamers, in the axial direction of the primary shaft and the secondary shaft in order to provide a means of biasing the bearing against the flange portion of element 31 to assist in securing the bearing in place.

Re: claim 7. Neuman et al. show in figure 1 the transmission comprising a second flange as labeled in the attached copy of figure 1, the end wall having a second outwardly facing side as labeled in figure 1 and a second inwardly facing side as labeled in figure 1 opposite to the second outwardly facing side around the second bearing mounting hole wherein the second flange extends radially from the second inwardly facing side toward the second bearing mounting hole, the second cover contacts via the outer side surface of the second bearing (to the same extent as shown in figure 1B of the instant application) the second outwardly facing side of the end wall and an outer side surface of the second bearing in the same plane, the depth of the second bearing mounting hole (which includes the space occupied by the second bearing) which extends in the axial direction is shorter than the combined thickness of the second bearing and the urging member in a free state, which combined thickness extends in the

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axial direction and the second bearing receives urging force in a direction from the urging member to the second cover and is thereby in contact with the second cover.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neuman et al. in view of Lamers as applied to claim 2 above, and further in view of Hattori.

Neuman et al. show in figure 1 the first and second covers having passages as indicated by Examiner in the copy of figure 1 attached to the Action. In this case the first cover is shaded in orange and is shown to the left of the first bearing shaded in yellow. This first cover is connected to the housing as shown and covers the one end portion of the one shaft and the bearing retainer as shown. Hattori teaches the use of passages 64 and 13d as shown in figure 1 being oil passages through which oil is supplied to the continuously variable transmission mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the passages of the covers of Neuman, as modified, to have included oil passages, as taught by Hattori, as it is well-known in the art to provide covers with passages in order to provide a means of transporting a working medium, for example, oil throughout the mechanism for lubricating purposes.

Response to Arguments

9. Applicant's arguments filed 1/21/03 have been fully considered but they are not persuasive. With respect to the arguments regarding the second cover of Neuman et al. it is noted that the structure shaded in green in the attached copy of figure 1 represents the second cover. When shaft 32 is braked by the engagement of the disks

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shown in the area of element number 38, the green shaded structure functions as a connected structure with the left side of the green shaded structure covering the end portion of the shaft and the right side of the green shaded structure engaging the outwardly facing side surface of the second bearing. In another perspective, it is noted that the claim language states that the cover covers "the one end portion of the one shaft" and that the one end portion is the portion of the shaft that penetrates the bearing mounting hole as claimed in lines 7-8 of claim 10. In light of the claim language it is noted that element 40 covers the one end portion (the end or outer periphery of the section of the shaft that penetrates the bearing mounting hole) as shown. The remaining arguments are moot due to the new interpretation including a new labeled version of figure 1 of the Neuman et al. reference.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 2/27/03
mmb
February 27, 2003

M. C. Graham
2/27/2003
MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310

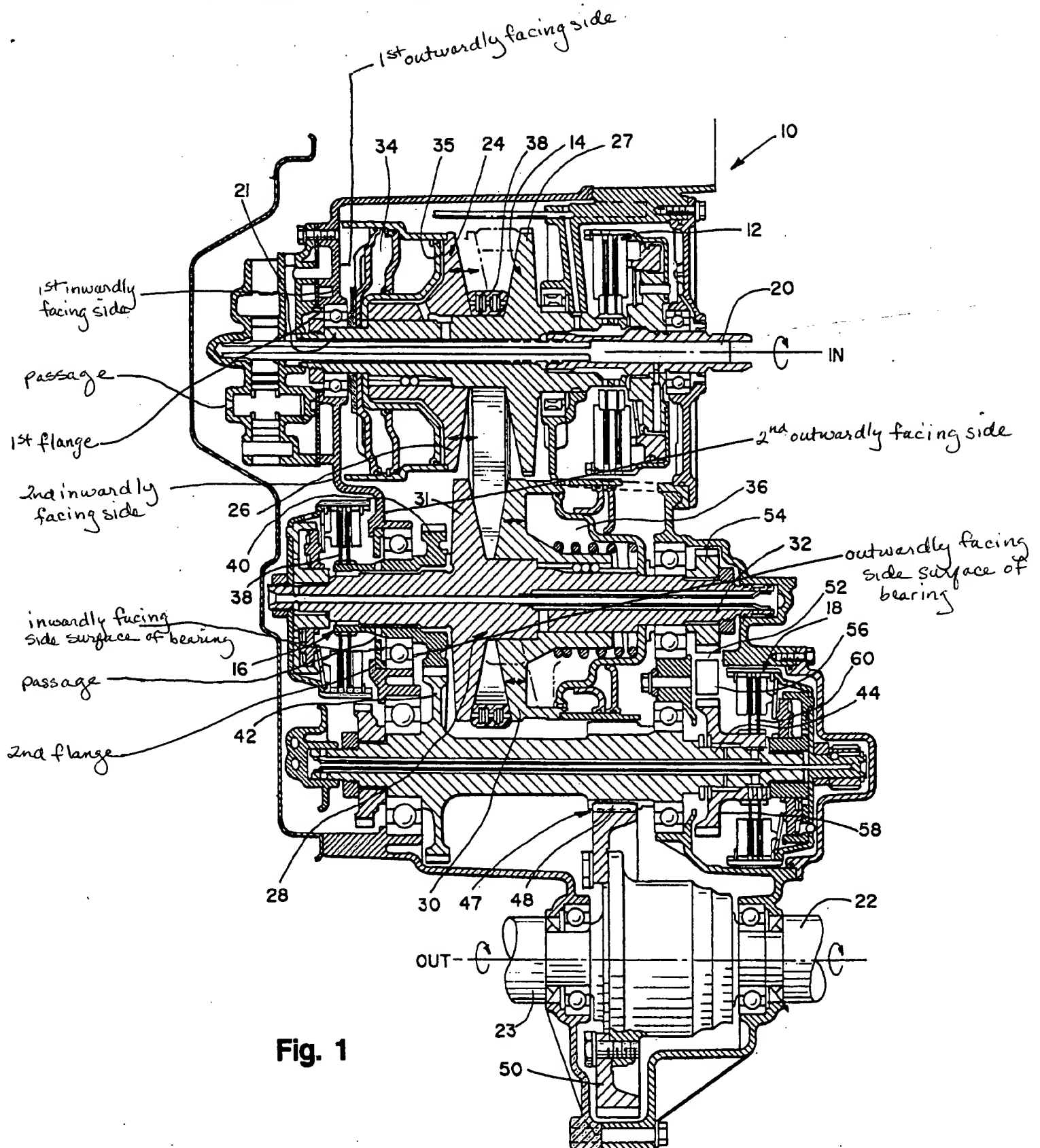


Fig. 1